

## ApeX-LNK Poly™ Acetabular Cup Liners

**November 7, 2007**

- 1. Submitter:** OMNI life science™, Inc.  
175 Paramount Drive  
Raynham, MA 02767
- Contact:** Edward Cheal, Ph.D.  
(508) 824-2444 x413 (voice)  
(508) 822-6030 (fax)

## 2. Device Name

Proprietary Name: ApeX-LNK Poly™ Acetabular Cup Liners  
Common Name: Acetabular cup, uncemented  
Classification Names: Hip joint metal/polymer/metal semi-constrained porous-coated uncemented prosthesis; and  
Hip joint metal/ceramic/polymer semi-constrained cemented or nonporous uncemented prosthesis  
Regulatory Class: Class II per 21 CFR §888.3353 and 21 CFR §888.3358

### 3. Intended Use

The ApeX-LNK Poly™ Acetabular Cup Liners are intended for use with the Apex Modular™ Acetabular Cup, in combination with the Apex Modular, Apex K2™, or Apex K1™ Hip Stem in total hip replacement procedures. The acetabular cup liners are intended to articulate with a metal (cobalt chromium) or ceramic (alumina) femoral head. This prosthesis is intended for single use implantation, and may be used for the following conditions, as appropriate:

- Non-inflammatory degenerative joint disease, including osteoarthritis and avascular necrosis;
- Rheumatoid arthritis;
- Correction of functional deformity;
- Congenital dislocation;
- Revision procedures where other treatments or devices have failed;
- Femoral neck and trochanteric fractures of the proximal femur.

#### 4. Device Description

The ApeX-LNK Poly™ Acetabular Cup Liners are manufactured of compression molded, cross-linked and stabilized ultrahigh molecular weight polyethylene, sterilized using ethylene oxide. The articular geometry of the liners are compatible with existing Apex Modular femoral heads, manufactured from cobalt chrome or alumina ceramic, 32 mm or 36 mm diameter, with various offsets.

**510(K) SUMMARY****5. Predicate Device Comparison**

Substantial equivalence is claimed to the Apex Modular (K031110), the Apex HCLA (K062489), the DePuy Marathon™ (K994415, K010171, and K033273), and the DePuy AltrX™ acetabular cup liners (K062148). The following table summarizes the similarities and differences between the subject ApeX-LNK Poly™ Acetabular Cup Liners and the predicate Apex HCLA, the DePuy Marathon and the DePuy AltrX Acetabular Cup Liners:

	<b>ApeX-LNK Poly Liners</b>	<b>Apex HCLA Liners</b>	<b>DePuy Marathon and AltrX</b>
<b>INTENDED USE</b>			
Modular liner in metal shell, primary and revision total hip replacement	Yes, cementless	Yes, cementless	Yes, cemented and cementless
<b>DESIGN</b>			
Liner engagement	19° taper and PE locking ring	19° taper and PE locking ring	Taper and PE locking ring (Pinnacle® shells)
Liner options	Neutral and 10° hooded	Neutral and 10° hooded	Neutral and lateralized (neutral and face changing)
Head diameters	32 and 36 mm	28 mm	28, 32, 36 mm
<b>MATERIALS</b>			
Cross-linked UHMWPE	Yes	Yes	Yes
Sterilization	Ethylene oxide	Ethylene oxide	Gas plasma

**6. Basis of Substantial Equivalence**

The ApeX-LNK Poly Acetabular Cup Liners described in this submission are substantially equivalent to the predicate devices based on similarities in design, intended use, material and manufacturing methods. The locking mechanism is identical to the locking mechanism in the Apex Modular Acetabular Cup Liners (K031110) and the Apex HCLA Acetabular Cup Liners (K062489). The material, manufacturing, sterilization and packaging methods are identical to those of the Apex HCLA Acetabular Cup Liners.



FEB 27 2008

Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

OMNI Life Science™, Inc.  
% Dr. Edward Cheal  
Vice President of Research and Development  
175 Paramount Drive  
Raynham, MA 02767

Re: K073150  
Trade/Device Name: ApeX-LNK Poly™ Acetabular Cup Liners  
Regulation Number: 21 CFR 888.3358  
Regulation Name: Hip joint metal/polymer/metal semi-constrained  
porous-coated uncemented prosthesis  
Regulatory Class: Class II  
Product Code: LPH, LZO, MEH  
Dated: February 4, 2008  
Received: February 5, 2008

Dear Dr. Cheal:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Center for Devices and Radiological Health's (CDRH's) Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometric's (OSB's) Division of Postmarket Surveillance at (240) 276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at (240) 276-3464. You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Mark N. Melkerson", with a stylized flourish at the end.

Mark N. Melkerson  
Director  
Division of General, Restorative  
and Neurological Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known): K073150

Device Name: ApeX-LNK Poly™ Acetabular Cup Liners

### Indications For Use:

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Prescription Use X

(Per 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_

(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

  
(Division Sign-Off)

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**Division of General, Restorative,  
and Neurological Devices**

510(k) Number K073150